

THE UNIVERSITY OF CHICAGO
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INSTITUTE OF RADIOBIOLOGY AND BIOPHYSICS

1155 East 57th Street
Chicago 37, Illinois

June 4, 1948

Professor J. Lederberg
Department of Genetics
University of Madison
Madison, Wisconsin

Dear Lederberg:

You should have by now a copy of a letter which I sent to Luria. In that experiment on a complementary pair of prototrophes we made some further observations, to which I will come back later in the course of this letter. We intend to make other such complementary pairs of prototrophes, but as yet we don't have the required phage resistant strains, free from virus, and are now in the process of making them.

Coming back now to the first complementary pair to which the letter to Luria refers, we found that almost all the prototrophes of these two matings were sensitive to phage 3, and only four or five out of the total of 117 (60 plus 57) were resistant to phage 3. These latter ones we tested for thiamine requirement, and found them to be requiring thiamine. From this it would seem to follow that the sensitivity to phage 3 which characterizes the Y_{10} strain is not due to any of the mutant genes which ~~were~~^{are} responsible for the growth factor requirement for L, T, or B_1 , and we would seem to be forced to conclude that it must have arisen by accident, possibly the same "accident" which produced the growth factor deficiency in L, T, and B_1 .

From among the prototrophes which are sensitive to T_3 we are trying to pick and preserve one which does not require thiamine, since this will give us a strain capable of growing in minimal medium, and sensitive to all seven phages. As you know, the wild type of the K strain is resistant to phage 3.

Sincerely,


Leo Szilard